

WASTE NOT, WANT NOT

As Hong Kong's landfills fill up, *The Peak* looks at initiatives to recycle the vast amounts of waste produced here every day.

STORY CHRISTY CHOI

PHOTOGRAPH BY BARETH GAY

In the foothills of Tuen Mun, on land that used to be open water, lies the Hong Kong EcoPark. Established in 2007, it takes up 200,000 square metres of government land, with most it available for affordable long-term lease. Here, companies and organisations re-use and recycle items from food to car batteries and old washing machines.

The space that St James' Settlement occupies is piled high with items such as rice cookers, washing machines, TV sets and telephones. It is home to the local NGO's Waste Electrical and Electronic Equipment (WEEE), a recycling programme.

Here, technicians refurbish household electronics for re-use by low-income households and NGOs, or for sale by NGOs and charities. Eighty per cent of the items that come through here are stripped to their basic parts: plastic, circuit boards, transformer, motors, wires, screws and so on – which are then sent to other facilities that recycle them. Twenty per cent of the appliances donated to St James can be refurbished.

Rice cookers, refrigerators and TVs are the most popular requests, says Tseung Tung-hoi, project manager at St James' Settlement. A wish list from NGOs and families is set out on a white board in the middle of a room full of refurbished appliances wrapped in plastic.

"This lets the technicians know what to work on first," says Wendy Cheung, senior service manager of the NGO. "Chinese New Year is one of our busiest times of year," she adds.

The government, along with companies, housing estates and non-profits including St James' Settlement, does an annual new year's drive for electronics.

Once appliances are brought to the facility, they are all meticulously accounted for, and those who have



donated an item can even track the life cycle of the appliance: where it ends up if it is refurbished, or whether it was stripped down to its parts and sold to a recycler.

To help maintain this facility, the NGO received a grant of HK\$10 million in October 2013 from the Environmental Conservation Fund. Part of St James' Settlement's mission is to educate the public about electronic waste recycling. "To throw away is easy. But how to make good use of the waste is also important," says Joyce Lin, a spokesperson for the organisation.

GOOD FOR BUSINESS

Nearby, on a plot of land occupied by K Wah (Waste Construction Materials & Waste Glass), machines crush glass and construction waste to produce the ubiquitous bricks that make up many of the city's

pavements. It produces an average of 30 million bricks a year, which line the streets of the city, from the Hung Hom promenade to the Kai Tak Cruise Terminal.

"We can save around half of the virgin material [collected for recycling]," says Brian Ngai, assistant sales manager at K Wah Construction Products. The company works with housing estates and with Baguio, a cleaning and waste management company.

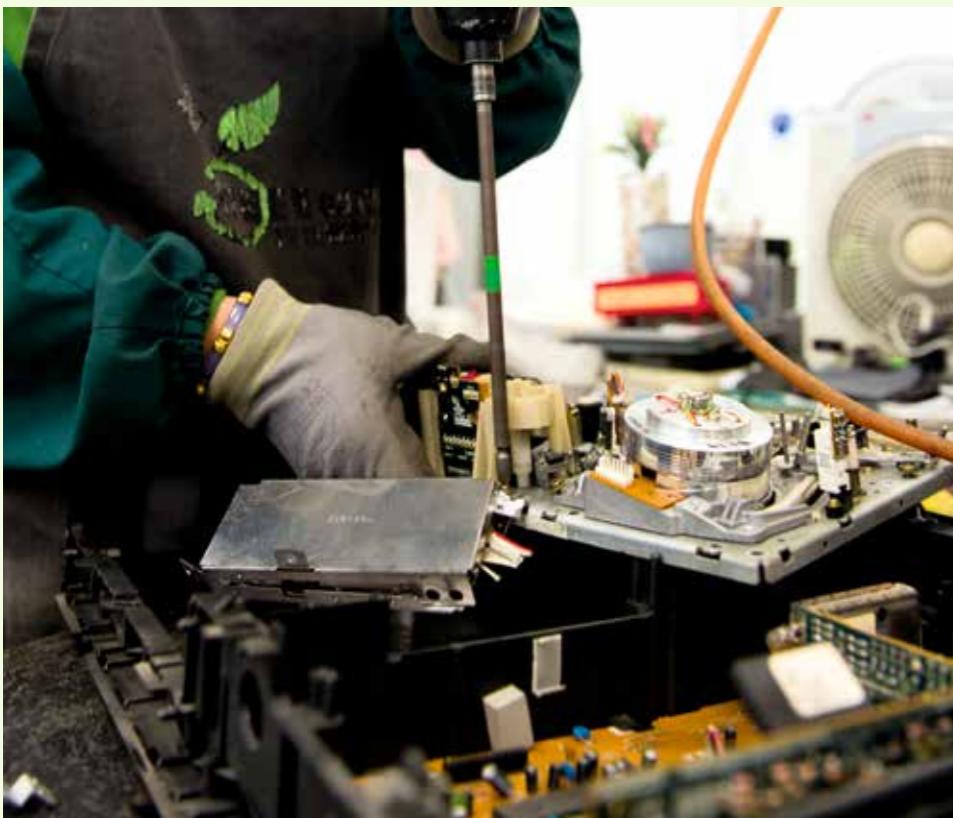
It is one of a number of businesses in the city that have made recycling profitable – and not just with the traditionally lucrative trades of metal and paper waste.

Since the government began charging for the dumping of construction waste in 2006, construction waste has gone down, with more of it being recycled.

In 2013, over 5.2 millions tonnes of solid waste were

PREVIOUS PAGE
Tseung Tung-hoi, project manager at St James' Settlement, at the NGO's premises at the Hong Kong EcoPark

CLOCKWISE FROM RIGHT
The 200,000-square-metre Hong Kong EcoPark was established in 2007. St James' Settlement collects used items for refurbishment and recycling there. A technician strips an appliance down to its basic parts.



PART OF ST JAMES' SETTLEMENT'S MISSION IS TO EDUCATE THE PUBLIC ABOUT ELECTRONIC WASTE RECYCLING

deposited in Hong Kong's landfills, according to the Environmental Protection Department. Of this, 45 per cent was domestic waste, 25 per cent construction waste and 22 per cent commercial and industrial waste.

With Hong Kong's landfills expected to fill by 2019, much more needs to be done. In a blueprint released by the Environment Bureau in May 2013, the government set a target to reduce the per capita municipal solid waste disposal rate, which was 1.27 kilograms per day in 2011, by 40 per cent to 0.8 kilograms per day in 2022.

Introducing a new household waste-charging scheme is one way

in which the government is looking to achieve this. The proposal, which looks to be approved by Hong Kong's Legislative Council this year, is modelled on Seoul's and Taipei's recycling and waste reduction efforts, and aims to provide extra incentives for individuals to recycle and waste reduction by charging households for their waste by weight.

In 1995, Taipei's and Hong Kong's daily per capita waste disposal rates were similar. But after the introduction of charges for waste, Taipei City's disposal rate of household garbage fell 65 per cent between 2000 and 2011, from 1.11 kilograms to 0.39 kilograms per capita.

"THERE'S SPACE FOR A FEW MORE [RECYCLING TRANSPORTATION COMPANIES]. WE'D WELCOME THE COMPETITION"

– Alfred Wong, HK Recycles



ENTREPRENEURIAL INITIATIVES

The vast majority of Hong Kong's municipal solid waste that is recycled (which amounted to about 37 per cent of total waste, in 2013) is processed and sent to China, with only a small amount of that portion (seven per cent, according to the Environmental Protection Department) recycled in Hong Kong, says Alfred Wong, the general manager of local startup HK Recycles.

The company was formed in 2012 in response to a public outcry when green groups found that property management companies were dumping plastics and other recyclables that were not profitable into landfills. Since then, it has carved itself a niche in the business of the logistics and transportation of recycled products. "Glass and plastic were ignored because they take time to clean and sort," says Wong.

Corporate clients use HK Recycles because they find Hong Kong's waste management and

recycling systems too murky. According to Wong, the auditor of one client – an international bank that has been implementing a green strategy – had not been able to get an answer from the waste management company it had contracted about how much of the bank's waste it was able to recycle.

HK Recycles currently collects paper, plastic, metal and glass from around 600 residences and businesses across Hong Kong, using an information and logistics IT system tailored for Hong Kong. It provides reports to its customers about how much of their waste is recycled, and conducts due diligence to ensure that waste is indeed recycled.

Wong says the company charges HK\$39 a month for pickups from residences, and between HK\$100 to HK\$10,000 per month for corporate clients, depending on the number of floors that waste need to be collected from. The company currently has two teams, each made up of a driver and two recyclable waste collectors. Wong says that they are constantly on the go, and that the company is looking to expand within the next few months. It has around 600 clients on a waiting list.

When asked whether he is worried about more companies joining the fray, Wong says he thinks there's space for a few more companies in the market. "We'd welcome the competition," he says.

Wong says that most of the recycling companies in Hong Kong gather and pre-process materials from overseas, such as the US and Europe, before sending them to mainland China or elsewhere. "It's simply because the quality of the recyclables are better [from overseas]," he says, adding that Hong Kong lacks the technology

COURTESY DEBBIE LEUNG (MAIN AND BOTTOM RIGHT) / HK RECYCLES (TOP OPPOSITE PAGE)

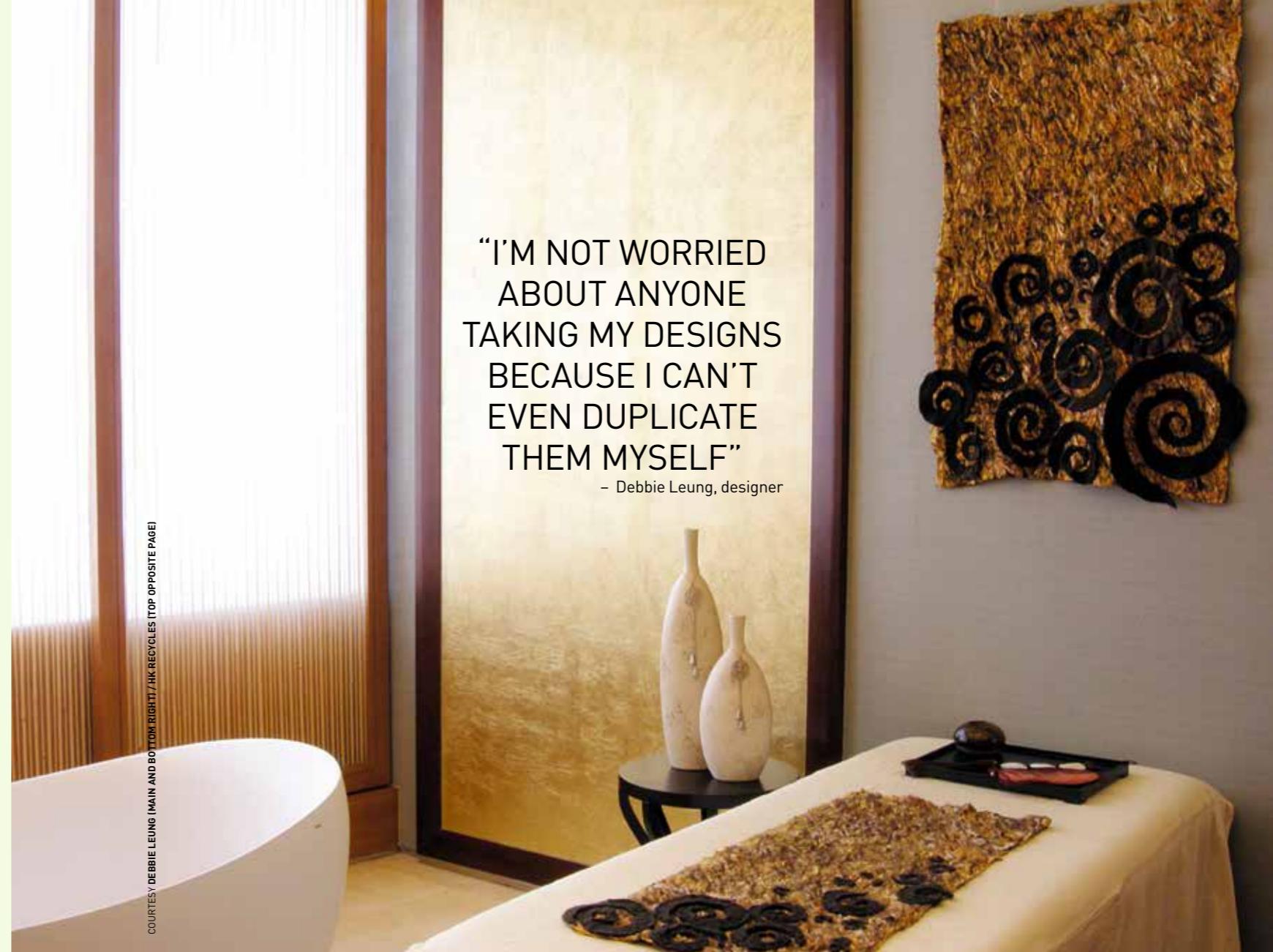


PHOTOGRAPH GARETH GAY (INSET AND BOTTOM OPPOSITE PAGE)

FROM TOP
HK Recycles collects recyclables from residences and companies. Frankie Tang, associate, and Alfred Wong, general manager, of HK Recycles.

"I'M NOT WORRIED ABOUT ANYONE TAKING MY DESIGNS BECAUSE I CAN'T EVEN DUPLICATE THEM MYSELF"

– Debbie Leung, designer



CLOCKWISE FROM ABOVE
Debbie Leung's decorative art made partly from recycled materials has been used by Shangri-La Hotel, Shenzhen. Leung's clothing has featured on catwalks. Leung models one of her luxury scarves made from recycled fabrics.



and space for the large-scale cleaning and sorting machines used in places such as Australia and the US.

While the government says 80 per cent of Hongkongers can find recycling bins nearby, people aren't aware of how to separate and sort their waste, or are too lazy to do so, says Wong.

Partly as a result of this, despite thousands of tonnes of plastic being dumped into Hong Kong landfills every week, recyclers here struggle to obtain good raw materials and keep their machines running.

REUSED AND BEAUTIFUL

Some individuals are also using creative ways to help reduce waste. Debbie Leung, a fibre artist

WITH HONG KONG'S LANDFILLS PROJECTED TO FILL UP BY 2019, A PROPOSED INCINERATOR IS IN THE WORKS

and designer who works out of her studio in Ap Lei Chau, makes clothing and other items from recycled fabrics and industrial cast-offs. Outside the premises of her shop in PMQ in Mid-Levels, she holds up some of her scarves, dresses and hats made from recycled materials. Soft to the touch and lightweight, they look like ink paintings, with streaks of blue-tinted greys and blacks standing out across a white or off-white backgrounds.

"This is made from pre-consumer silk waste," Leung says, holding up a backless top. It reflects a design once favoured as underwear in the Tang Dynasty. "It's quite sexy," she says with a chuckle. To make her recycled clothing, partitions, bags and other wares, Leung takes old sweaters and tears them up to make new fabric, weaving in silk and velvet from other clothes.

Around 50 per cent of the material that the designer uses

ABOVE
The government proposes to build a waste management facility that includes an incinerator that will generate energy on reclaimed land, near the small island of Shek Kwu Wan.

comprises cast-offs from factories in China, and another 10 to 15 per cent is given to her free of charge by the Green Ladies at St James' Settlement, who run several charity shops across Hong Kong. In return, Leung sends over the occasional piece for the NGO to raise money for its programmes to help low-income families in the city. Partly because the work is so labour-intensive, a wool scarf typically costs around HK\$2,500, and a top HK\$3,000 to HK\$4,000.

Outside her shop in PMQ, Leung's 19-year-old assistant, Jasmine Wong, is making felt, by rubbing bubble wrap against recycled wool soaked in soapy water. "It needs agitation for the fibres to intermingle and become fabric," says Leung. Wong has been rubbing the fibres for almost an entire day for a piece of felt the size of two large table placemats.

Using similar techniques, Leung has made artwork from recycled materials for the Shangri-La Hotel, Shenzhen.

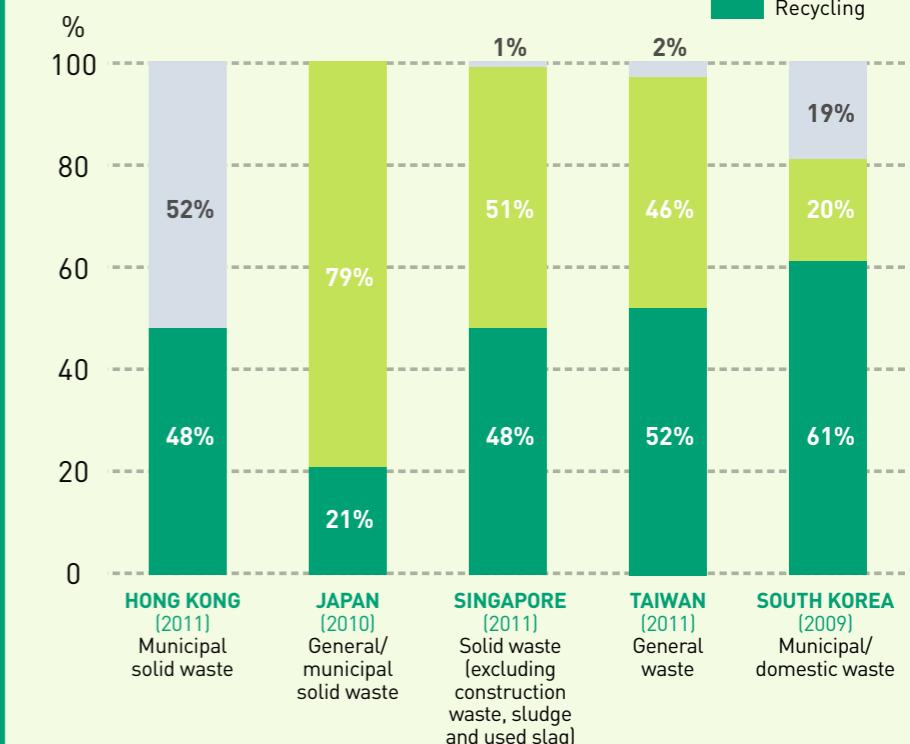
"I'm not worried about anyone taking my designs, because I can't even duplicate them myself," she says. Once the materials run out, you can't find more, she adds, which is why only a small percentage of her products are from recycled materials.

Meanwhile, although her pieces sell, Leung is choosing to close her small shop at PMQ because the foot traffic has not proven enough for her to make the HK\$30,000 in rent per month. PMQ and the government, she says, need to attract more business customers to the premises to make it work. "The B2B people, rather than all the tourists," she says. ☈

PHOTOGRAPH BY SCMP

A BURNING ISSUE

MANAGING WASTE HOW ASIAN CITIES COMPARE



With Hong Kong landfills projected to fill up by 2019, a proposed incinerator is in the works.

WHAT: The proposed Integrated Waste Management Facility would include a 'moving grate' incinerator that generates energy by burning waste, and a sorting and recycling plant. The incinerator would initially treat 3,000 tonnes of municipal solid waste per day. (An average of 9,547 tonnes each day was deposited in Hong Kong landfills in 2013).

WHERE: An artificial island to be built off of Shek Kwu Wan, a small island near the coast of South Lantau.

WHEN: The project is slated to be commissioned sometime between 2022 and 2023, but has been held up in the courts as a result of a judicial review in the High Court and the Court of Final Appeal. This has been partly related to the power of the director of the Environmental Protection Department to approve an environmental impact assessment report which was prepared and submitted on her behalf.

WHO OPPOSES WHAT? Lantau residents and environmental groups oppose the proposed location of the facility, citing concerns about potential toxic ash released into the environment. They are worried that more marine traffic and reclamation in the area will pollute the habitat of endangered pink dolphins and impact fisheries, and have lobbied to have the incinerator instead be built at the government's second-choice site, near the Tuen Mun landfill. Some legislators have also suggested that if the incinerator is built, the government will not be proactive in trying to recycle or reduce waste, and that newer technologies now exist that can burn the trash more effectively, producing less ash and sludge.

WHAT THE GOVERNMENT SAYS: The newer technologies are several times the cost of the proposed system, which has already been successfully used in other countries, and a new environmental assessment would further delay construction. The government says it would adopt standards followed by the European Union to regulate emissions at the facility.